

WHAT IS CLAIMED IS:

1. A method for manufacturing a composite material, the composite material including orientated thermoplastics having a first stress-free melting point and non-orientated thermoplastics having a second stress-free melting point, the method comprising:
heating the orientated and the non-orientated thermoplastics to a temperature level above the higher of the first and second stress-free melting points; and
holding the orientated thermoplastics under stress in a direction of their orientation.
2. The method as recited in claim 1, wherein the orientated thermoplastics and non-orientated thermoplastics are made of the same material.
3. The method as recited in claim 1, wherein the orientated thermoplastics and non-orientated thermoplastics are made of the same mixtures of material.
4. The method as recited in claim 1, wherein the orientated thermoplastics and the non-orientated thermoplastics form one of fibers and narrow bands.
5. The method as recited in claim 4, wherein the orientated thermoplastics form at least one orientated layer and the non-orientated thermoplastics form at least one non-orientated layer.
6. The method as recited in claim 5, wherein the at least one orientated layer form a fabric such that a first plurality of essentially parallel fibers and/or narrow bands configured to reinforce the composite material in a warp direction are interwoven with a second plurality of essentially parallel fibers and/or narrow bands configured to reinforce the composite material in the weft direction.
7. The method as recited in claim 6, wherein an angle between the warp and weft directions is from 45° to 135°.

8. The method as recited in claim 1, wherein the composite material includes polyolefins.

9. A method for manufacturing a three-dimensional component made of a composite material, the composite material including orientated thermoplastics having a first stress-free melting point and non-orientated thermoplastics having a second stress-free melting point, the method comprising:

heating the orientated and the non-orientated thermoplastics to a temperature level above a higher of the first and second stress-free melting points,

holding the composite material under pressure in a three-dimensional mold; and

holding the orientated thermoplastics of the composite material under stress in a direction of their orientation using a device for holding the composite material.

10. The method as recited in claim 9, wherein the composite material is manufactured according to a method as recited claim 1.

11. A composite material made of orientated and non-orientated thermoplastics, wherein the composite material is manufacturable according to the method as recited in claims 1.

12. A device for holding a composite material, comprising:

a fastening device having at least three access surfaces for securing the composite material; and

a stress device configured to apply a tensile stress to the composite material.

13. The device as recited in claim 12, wherein the composite material includes orientated and non-orientated thermoplastics and wherein the stress device is positioned so as to apply the tensile stress in a direction of an orientation of the orientated thermoplastics.

14. The device as recited in claim 12, further comprising a plurality of thermal shieldings corresponding to the at least three access surfaces.

15. The device as recited in claim 12 wherein the fastening device includes at least one clamp.

16. The device as recited in claim 12, wherein the at least three access surfaces are disposed within a frame.